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ABSTRACT

This compilation represents a selected bibliography of the social sciences in forestry, including economic, historic, sociological, and business aspects. Five major categories are included: (1) social science applied to forestry at large; (2) social science applied to forestry's productive agents; (3) social science applied to forest production; (4) social science applied to manufacturing; and (5) social science applied to marketing, trade, and demand for forest output. Arranged alphabetically by author, each entry contains the source of information, place and date of publication, volume number and number of pages. A brief description of each resource is given. Compilation sources include many professional journals and publication lists from the United States Forest Service experiment stations. (BT)

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SOCIAL SCIENCES in FORESTRY

A CURRENT SELECTED BIBLIOGRAPHY

NO. 43 JUNE 1977

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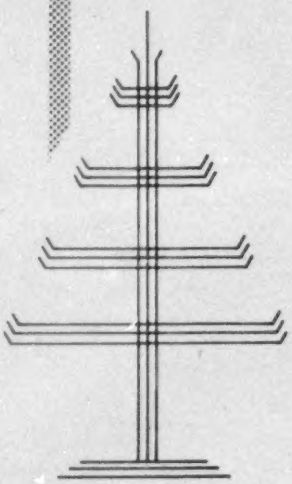

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No. 43 June 1977

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SOCIAL SCIENCES IN FORESTRY

Subject-Matter Classification Scheme

Note: This outline is regarded as working for the most part from the general to the specific. Material covering two or more sections of this outline is classified in the most general of these sections. Material which is classifiable in any of two or more sections is classified in the most specific of these sections.

I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

A General principles, scope, content, method

B History, status, prospects of forestry in an area, society in an area (This section includes material on forest resources alone, as opposed to those on consumer or intermediate resources alone, for which see appropriate later sections.)
1 General
2 United States, Canada
3 Other north-temperate nations
4 South-temperate nations
5 Nations in lower latitudes

C Law, politics, policy, plan, program, and their administration
1 General
2 Public
3 Private

D Influence other than legal or political (See also IID.)
1 Taxation
a General
b Property, general and special; severance; lieu payment
c Income, inheritance, other
2 Valuation
3 Insurance
4 Social interest, value system, custom, folklore, culture
5 Characteristics of the individual
6 Public relations, other

E Research (For research on specific topics, see those topics.)

F Professional and subprofessional affairs, education, employment of foresters

G Social and economic development

H Environmental concern

Subject-Matter Classification Scheme--Continued

II APPLIED TO FORESTRY'S PRODUCTIVE AGENTS
(See also the individual operation or type of output in III, IV, V.)

A Labor (Some material on labor will be found in IF, IV.)
1 General, employment, demand
2 Supply, union
3 Wage, hours, productivity, technology, return, benefit
4 Working condition, turnover, absenteeism, safety, insurance
5 Characteristics of the worker

B Owner, ownership, manager, entrepreneur (See also IC, IIC3.)
1 General
2 Public
a General
b Federal, central
c Regional, local
3 Private
a General
b Industrial
c Nonindustrial

C Land
1 Context of supply, requirement, etc.
2 Description, use trend and status, interpreted description
3 Management, use prospect and plan, planning, marketing, tenure
4 Research method

D Capital
1 General, investment, interest, finance
(For investment in forest production, see IIIE; for that in manufacturing, see IVA4.)
2 Credit

III APPLIED TO FOREST PRODUCTION (See also IIB, C.)

A Production including nontimber commodities and services
1 General, supply, multipurpose management
2 Christmas trees, greens
3 Range and livestock
4 Naval stores, maple product
5 Recreation and amenities
a General
b Developed recreation
c Wilderness
d Amenities
6 Water, soil, watershed management, shelterbelts
7 Wildlife, hunting, fishing
8 Urban forestry

Subject Matter Classification Scheme--Continued

III APPLIED TO FOREST PRODUCTION--Continued

B Production chiefly of timber
1 General, supply
2 Soil, site, site improvement
3 Tree regeneration and improvement
4 Intermediate cutting, pruning, stand improvement
5 Harvest cutting, rotation, cutting cycle, stocking, regulation, allowable cut
(For harvesting treated as engineering, see IVB.)

C Roads, other forest-management transportation
(For transportation in harvesting, see IVB4; in marketing, see VD.)

D Damage and protection
1 From fire
2 Prescribed burning
3 From insects
4 From other agencies
(For water damage and soil erosion, see IIIA6.)

E Decision making, planning, investment, accounting, inventorying
(For investment in general, see IID1.)

IV APPLIED TO MANUFACTURING
(For material on forestry in general, including forest land resources, see IB.)

A The industry in general
1 Status and trend
a General
b United States, Canada
c Other north-temperate nations
d South-temperate nations
e Nations in lower latitudes
2 Directory
(Includes those covering specific branches of industry.)
3 History
4 Decision making, planning, investment, accounting, inventorying
(For a specific branch of industry, see that branch, "Operation of firm"; for investment in general, see IID1.)

B Timber-harvesting industry
(Includes roundwood in general; for specific types, see IVC, "raw material." For harvesting as silviculture, see IIIB4, 5.)
1 Status and trend
2 Operation of firm
3 Utilization of the stand or tree
(For utilization of a specific product, see the branch of industry in question.)
a General
b Logging residue and its disposal
4 Transportation (Skidding, yarding, loading, hauling to mill. For transportation in forest management, see IIIC; in marketing, see VD.)

Subject-Matter Classification Scheme--Continued

IV APPLIED TO MANUFACTURING--Continued

C Wood-using industry
- 1 Lumber, allied product, pallet
  - a Industry status and trend
  - b Production, consumption, stocks, other statistics (For sawtimber, see IB, IVB; for sawlog, see IVC1d.)
  - c Operation of firm
  - d Raw material
- 2 Pulp, paper, board
  - a Industry status and trend
  - b Operation of firm
  - c Raw material
  - d By-products
- 3 Veneer, plywood, panel
  - a Industry status and trend
  - b Operation of firm
  - c Raw material
- 4 Bark, chips, other residue (See also IVB3 and the industry branch in question, "Operation of firm.")
- 5 Pole, piling, post, mine timber
- 6 Railway tie
- 7 Furniture
- 8 Charcoal, fuelwood
- 9 Particleboard, hardboard, fibreboard
- 10 Construction
- 11 Other wood-using industry

D Other forest industry
- 1 Decorative product
- 2 Naval stores
- 3 Maple product
- 4 Other

V APPLIED TO MARKETING, TRADE, DEMAND FOR FOREST OUTPUT
(For marketing and demand for productive agents, see II.)

A Demand (See also IF.)
- 1 General; history of consumption; consumption-production relationships
- 2 Consumption or production prospect, goal, requirement, prediction (For material on short-term requirement, see the industry in question in IV, "Industry status and trend.")
- 3 Consumer and his preference (For material on specific forest resources, see also IIIA, B.)

Subject-Matter Classification Scheme--Continued

V APPLIED TO MARKETING, TRADE, DEMAND FOR FOREST OUTPUT--Continued

B Market, marketing, trade, export, import
- 1 General
  - a General
  - b Futures, hedging
- 2 Stumpage, log
- 3 Lumber, plywood, allied products
- 4 Pulp, paper, board
  - a Product
  - b Wood raw material
- 5 Christmas trees, greens
- 6 Recreation
- 7 Other type of output (See also IIC3.)

C Price, value
- 1 General
- 2 Stumpage, log
- 3 Other type of output
- 4 Price reporting

D Transportation
(For transportation in forest management, see IIIC; in harvesting, see IVB4.)

I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

A MC KELVEY, P. J. Presidential address: forestry and society. Paper presented to the 1976 Annual General Meeting. New Zealand Journal of Forestry 21(2): 162-174. 1976.

B1 SCHULZ, H., and W. PATZAK. Development and future of wood utilization. In German; Eng. sum. Holz als Roh- und Werkstoff 33(10): 381-392. 1975.

Production and consumption of wood products. To meet world demand calls for intensive utilization of forest and industrial wood residues, improved use of fuelwood, expansion of forest areas, and improved forestry practices.

B1 WORLD WOOD. World wood review 1976. World Wood 17(6): 84 pp. 1976.

Statistics on population, forest resources and production, exports and imports of forest products, and sawmills and other wood-using plants in 128 countries, 1975; reviews of markets and forestry in the major countries.

B2 BARBER, JOHN C. Forestry in the Midsouth. Journal of Forestry 74(8): 505-511. Aug 1976.

B2 COBB, R. C. (ET AL.). Forestry on Indian lands in Canada. Department of Indian and Northern Affairs, and Forestry Service, Environment Canada, Ottawa. 53 pp. 1976.

Past and present utilization of forest resources in Indian reserves in Canada. Details of forest surveys and reports made by the Canadian Forestry Service between 1948 and 1970.

B2 CROSSLEY, DESMOND I. The case for industrial management of Canada's forest lands. The University of British Columbia, Vancouver. 16 pp. 1976.

A province-by-province review of the status of crown-lands management in Canada, with emphasis on the problems of irresponsible forest practices, excessive allotments to industry, failure to obtain forest regeneration, licensees' lack of security in tenure, etc. Description of program of North Western Pulp and Power Limited, in Alberta, as example of progressive private enterprise in forestry.

B2 KNIGHT, HERBERT A. Stand-age profile of North Carolina's timberland. USDA Forest Service Southeastern Forest Experiment Station Res. Bul. SE-38, 15 pp. 1976.

I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

North Carolina's forests are a collection of small, even-aged stands whose age distribution reflects historical land-use patterns, economic cycles, and forestry practices. An examination of the age distribution and condition of these stands supplements the fourth Statewide evaluation of North Carolina's timber resource completed in 1975.

B2 MURPHY, P. A. East Texas forests: status and trends. USDA Forest Service Southern Forest Experiment Station Res. Bul. SO-61, 25 pp. 1976.

Softwood inventory in east Texas grew 24 percent between 1965 and 1975; hardwood volume gained 13 percent. Forest area declined slightly, a trend that is expected to continue.

B2 NATIONAL ACADEMY OF SCIENCES. Renewable resources for industrial materials. National Academy of Sciences, Washington. 266 pp. 1976.

Society, and hence government, should be concerned with development of renewable forest and farm raw materials and their land base--a great, underused national resource, potentially substitutable for nonrenewable resources and largely independent of foreign imports.

B2 SCHALLAU, CON H. The Rocky Mountain timber resource--how much, where, and who owns it? Paper presented at the Rocky Mountain Forest Industries Conference, Missoula, Montana, April 26-28, 1976. USDA Forest Service, 4 pp. 1976.

Timber production in the Rocky Mountain region, which doubled between 1952 and 1970, appears to have reached a plateau. Timber supply can be improved by intensive management. Investment funds and more site-specific timber assessments are needed.

B2 SHEFFIELD, RAYMOND M. Forest statistics for the Northern Piedmont of Virginia, 1976. USDA Forest Service Southeastern Forest Experiment Station Res. Bul. SE-39, 33 pp. 1976.

Since 1965, the area of commercial forest land increased nearly 4 percent in this 18-county area. Commercial forests now occupy 2.6 million acres, or 58 percent of the total land area. Private nonindustrial landowners hold 86 percent of these forests. The inventory of softwood and hardwood growing stock increased by 33 and 30 percent, respectively. Volume of all major softwood and hardwood species increased.

I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

B2 SHEFFIELD, RAYMOND M. Forest statistics for the Southern Piedmont of Virginia, 1976. USDA Forest Service Southeastern Forest Experiment Station Res. Bul. SE-35, 33 pp. 1976.

Since 1965, the area of commercial forest land changed little in this 17-county area. Nearly 179,000 acres were artificially regenerated. The area of commercial forest occupied by sawtimber stands increased by 39 percent. Volume of softwood and hardwood growing stock increased by 22 percent and 29 percent, respectively. Almost all major species registered gains in volume. In 1975, annual net growth of growing stock exceeded removals by 82 million cubic feet.

B2 STEENBERG, BORJE K. The northern coniferous forest, a primary source of world resources, can Canada meet the growing challenge of expanding world demands? Theme paper for the Annual Meeting CIF/IFC, Thunder Bay, 1976. The Forestry Chronicle 52(6): 255-262. Dec 1976.

B2 USDA FOREST SERVICE. Utilization and marketing as tools for aspen management in the Rocky Mountains. Proceedings of the symposium held at Fort Collins, Colorado, Sep 8-9, 1976. USDA Forest Service Rocky Mountain Forest and Range Experiment Station Gen. Tech. Rep. RM-29, 120 pp. 1976.

Uncontrolled wildfire, which used to assure regeneration of Rocky Mountain aspen, is no longer socially acceptable. Harvesting is therefore necessary to prevent this unique forest type from reverting to coniferous forest. 33 papers deal with five areas: perspectives on Rocky Mountain aspen resource, aspen ecology and harvesting responses, market opportunites and limitations, research advances in aspen utilization, and applying research information to aspen management decisions.

B2 VILLENEUVE, P., R. BRETON, and J. C. MERCIER. Basic study of forest research policy in Quebec. In Frencn. Ministere des Terres et Forets, Quebec, Canada. 1975.

Part 1: Generalities and definitions, 85 pp. Part 2: The economic and social importance of forests and an analysis of the forest industry, 257 pp. Part 3: Proposed method for evaluating the profitability of forest research, 48 pp. Part 4: Forestry research organizations in Quebec, the financial assistance given to research and the distribution of effort, 74 pp. Part 5: Lists of the problems of the forestry sector and proposals for an over-all forest research program for Quebec, 291 pp. Part 6: Elements of a forest research policy for Quebec, 130 pp.

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B3 AGRARISCHE RUNDSCHAU. Forestry and forest policy in Austria. In German. Agrarische Rundschau No. 3, pp. 1-45. 1976.

B3 BENASSI, L. The development of forest management, and modern concepts. In Italian; Fre. sum. Annali, Accademia Italiana di Scienze Forestali No. 24, pp. 313-330. 1975.

Forest management in Europe, particularly Italy, during the last 300 years. World shortage of wood makes maximum sustained yield of timber products, rather than recreation and nature conservation, a primary objective of management.

B3 BENVENUTI, V. Problems and prospects of mountain zones, forests and the environment in the programs of the European Economic Community. In Italian; Fre. sum. Accademia Italiana di Scienze Forestali No. 24, pp. xxi-xxvi. 1975.

Inaugural address to mark the opening of the Academy's twenty-fourth year; traces the EEC countries' growing interest in environmental problems. Measures taken by EEC Council to implement a common policy for soil conservation, forest protection and control of land use, especially in mountain zones.

B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. Forest resources in the European region. In English and French. Rome. 35 pp. 1976.

Forest types, ownership, and management status. Growing stock and increment in operable forest, trends in forest removals, and future wood supply potential.

B3 FORET. The forests of Canton Fribourg (Switzerland) in brief. In French. Foret 29(7): 189-195. 1976.

B3 HERMANN, RICHARD K. Impressions of forestry in Turkey. Journal of Forestry 74(9): 629-633. Sep 1976.

B3 HOLM, L., and R. HJORTH. The place of forestry and agriculture in the Swedish national physical plan. Parts I and III. In Swedish. Kungl. Skogs- och Lantbruksakademiens Tidskrift No. 1/2, pp. 77-92. 1976.

B3 HORWITZ, ELLIE. Forestry in Greece. Jounral of Forestry 74(11): 780. Nov 1976.

B3 HUTTUNEN, TERHO. Wood consumption, total drain, and forest balance in Finland, 1973-75. In Finnish; Eng. sum. Folia Forestalia 277. 48 pp. 1976.

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B3 INSTITUTO NACIONAL PARA LA CONSERVACION DE LA NATURALEZA. National forest inventory of Spain, Extremadura region. In Spanish. Instituto Nacional para la Conservacion de la Naturaleza, Madrid. 132 pp. 1976.

B3 JANZ, K. Timber felled according to the stump inventories of the Swedish National Forest Inventory, 1969/70-1973/74. In Swedish. Skogen 63(4): 128-130. 1976.

Compares the 1972-73 and 1973-74 inventories with earlier records on the distribution of cuts by region, species, diameter class, area cut, and ownership category. Total fellings, 1969-1974, were higher than in the previous 5-year period.

B3 KERESZTESI, B. Forestry in Denmark. In Hungarian. Erdo 25(3): 123-134. Mar 1976.

B3 KISLOVA, T. A. The economic nature of expenditures in forestry. In Russian. Lesnoi Zhurnal No. 4, pp. 135-138. 1975.

Socio-economic aspects of forest production in Soviet Union.

B3 KONOPKA, JOZEF. Forests and forest research in Austria. In Czech. Lesnicky Casopis 22(3): 271-279. 1976.

B3 KRZYSIK, F. Progress in the integration of forestry and the wood industry in Poland. In Polish; Rus. and Eng. sum. Sylwan 119(6): 12-23. 1975.

B3 LINDSAY, J. M. Some apsects of the timber supply in the Highlands, 1700-1850. Scottish Studies No. 19, pp. 39-53. 1975.

Historical study of the development of conflicting demands for timber in the Scottish Highlands between landowners with commercial interests and their tenants. Clear felling of Scots Pine; development of hardwood coppice management; conifer planting; the development of commercial sales of forest products to external markets; status of "black wood" or "barren timber;" effects of commercial exploitation of forest resources on the rural economy.

B3 LYBERG, B., and O. JACOBSSON. Timber demand and timber supply in Sweden, Parts I & II. In Swedish. Kungl. Skogs- och Lantbruksakademiens Tidskrift 115(1/2) 47-48; 49-64. 1976.

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B3 MAMMEN, E. German-Finnish exchanges of experience on the commercial, conservation, and recreation functions of woodlands. In German. Berichte uber Landwirtschaft 54(2): 325-328. 1976.

B3 PAPANEK, FRANTISEK. Status of British Forestry. In Czech. Lesnicky Casopis 22(3): 281-291. 1976.

B3 PELCNER, JULIUS. Analysis of influences on the profitability of forest management in the Slovak Socialist Republic. In Czech. Lesnicky Casopis 22(4): 361-377. 1976.

B3 PRONI, G., and M. PREVOSTO. Balance sheet on industrial wood in Italy. In Italian; Fre., Eng., and Ger. sum. Cellulosa e Carta 27(2): 3-20. 1976.

Two-thirds of Italy's wood requirements are imported.

B3 REDOGORELSE, FORSKNINGSSTIFTELSEN SKOGSARBETEN. The Rationalization Conference, 1976. In Swedish; Eng. sum. Redogorelse, Forskningsstiftelsen Skogsarbeten No. 3, 119 pp. 1976.

19 papers on the present position and trends in various branches of Swedish forestry.

B3 SAMSET, I. Forestry in China. In Norwegian. Tidsskrift for Skogbruk 84(1): 3-62. 1976.

B4 CLEAR, T. Forestry journey to New Zealand. Paper presented at the 34th Annual General Meeting of the Society of Irish Foresters, Dublin, March 13, 1976. Irish Forestry 33(2): 80-93. 1976.

B4 LEWIS, N. B. A hundred years of state forestry, South Australia 1875-1975. Bulletin No. 22, Woods and Forests Dept. South Australia, 122 pp. 1975.

B4 LLOYD, R. C., and D. W. GUILD. The role of forestry in the development of the Northland region. New Zealand Journal of Forestry 21(2): 175-194. 1976.

Developing a wood industry based on plantations of exotics in this area of New Zealand would help export industry, increase employment, and alleviate erosion problem.

B4 YOUL, R. Society makes bigger demands on its forests. Arboricultural Journal 3(1): 57-61. Sep 1976.

Changing nature of forestry in Australia.

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B5 BORGONOVI, M. The forest reserve of the Companhia Vale do Rio Doce at Linhares, inexhaustible source of forest products. In Portuguese; Eng. sum. Brasil Florestal 23(6): 36-47. 1976.

B5 BOROTA, JAN. Some observations about India, Indian forestry, and forest research in India. In Czech. Lesnicky Casopis 22(4): 389-398. 1976.

B5 CARSON, G. L. Forestry and forest policy in Papua New Guinea. Department of Forests, Port Moresby, Papua New Guinea. 21 pp. 1975.

Forest policy, administration, industry, and legislation in Papua New Guinea, with guidelines for policy revisions.

B5 CHATTERJEE, NILAMBER. The prospects and potentials of forest-based exports from India. Dissertation, Ph.D. University of Michigan. 332 pp. 1976.

Forest-based exports are key contributors to economic development of India.

B5 HAUFE, H. H. R. Forestry development trends in Latin America. In Spanish. Food and Agriculture Organization of the United Nations, Forestry Department. Seminar on Forestry Employment in Latin America, Lima, August 8, 1976. 10 pp. 1976.

B5 HOOKER LEGUIA, R., and J. BOHORQUEZ REJAS. Report of Peru. FAO Technical Conference on Tropical Humid Forests. In Spanish. Food and Agriculture Organization of the United Nations, Forestry Department. Seminar on Forestry Employment in Latin America, Lima, August 8, 1976. 18 pp. 1976.

B5 LATHAM, ROBERT P. The economics of forestry information, case studies in Central America. Dissertation, Ph.D. University of Minnesota. 146 pp. 1975.

Design of natural resource information projects. Theoretical models identify and relate the major factors in the design of such projects. Validity and practical use of these models tested in a series of case studies in Central America.

B5 OMOLUARI, A. C. The optimum future size of Nigeria's forest estate. Obeche No. 10, pp. 98-104. 1974.

Environmental and economic concerns: area of land that should be permanently under forest to prevent erosion, and contribution that forestry can make to economic development of country.

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B5 PARASNIS, SURESHCHANDRA S. Forestry in the rural economy of India, with particular reference to agriculture. Dissertation, Ph.D. University of Michigan. 317 pp. 1976.

Qualitative and quantitative analysis of the protective and socio-economic effects of forestry in a rural economy. Relationship between food production and forestry.

B5 VOLATRON, B. Exploitation of the forestry resources of Brazilian Amazonia and Colombia. The medium-term outlook for imports of logs and sawn timber from these countries on the French tropical-woods market. Part 1. In French; Eng. and Spa. sum. Bois et Forets des Tropiques No. 165, pp. 59-76. 1976.

Forest resources of Amazonia; forest development projects in progress; primitive logging methods practiced and silvicultural techniques attempted in the Varzea bottomland forests.

B5 VOLATRON, B. The wood industries in the Philippines in 1975. In French; Eng. and Spa. sum. Bois et Forets des Tropiques No. 164, pp. 63-74. 1975.

Statistics on Philippine forest resources and their use.

C2 ANDERSON, JR., GORDON B. Oregon's forest conservation laws, Part I. American Forests 83(3): 16-19, 52-56. Mar 1977. Part II. American Forests 83(4): 19-21, 41-44. Apr 1977.

History of Oregon's forest conservation laws leading up to the Forest Practices Act of 1971.

C2 FLORA, DONALD F. Long-term strategic objectives of the nation as a factor in public timber policy. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 31 pp. 1976.

Criteria for judging timber policy options are drawn from four elements of long-term strategic-resource policy; military security, self-sufficiency, future economic welfare relative to that of other nations, and future economic welfare relative to that of today.

C2 FOOD AND AGRICULTURAL LEGISLATION. Bolivia. Decree-Law No. 11686: The National General Forest Act. August 13, 1974. Food and Agricultural Legislation 24(2): 49-72. 1975.

Text of the act.

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C2 FORST- UND HOLZWIRT. Legal problems of forestry and conservation. In German. Forst- und Holzwirt 31(11): 193-212. 1976.

Papers read at a symposium in Freiburg, West Germany dealing with the new forest laws and policies in Austria, Bavaria, and Baden-Wurttemberg.

C2 GLASCOCK, JR., H. R. Why not an American forestry policy, now? American Forests 83(4): 22-25. Apr 1977.

C2 HAMEL, ROBERT. Federal Water Pollution Act, problems for forest industry. Paper presented at General Session 1976 Annual Meeting of American Pulpwood Association. The Northern Logger and Timber Processor 25(9): 8-9, 42. 1977.

Act passed in 1972 has provided a basis for recent governmental efforts to control water pollution associated with forestry operations.

C2 HOWE, CHARLES W. Economic and social perspectives relevant to forest policy. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 110 pp. 1976.

The paper has 5 sections: (1) evolution of conservation thought in the 20th century; (2) interpretation of "sustained yield" from a social viewpoint; (3) resource allocation over time and the appropriate discount rate; (4) option value and the irreversibility of development decisions; (5) illustrations of the management of nonforest systems which have relevance for forest management.

C2 LE MASTER, DENNIS C., and LUKE POPOVICH. Development of the National Forest Management Act. Journal of Forestry 74(12): 806-808. Dec 1976.

Act became law on October 22, 1976.

C2 MC GUIRE, JOHN R. National forest policy and the 94th Congress. Journal of Forestry 74(12): 800-805. Dec 1976.

C2 THOMAS, G. P. National policy urged for better forest management. Paper presented at the 57th Annual Meeting of the Woodlands Section, Canadian Pulp and Paper Association, held in Montreal, March 28-31, 1976. Pulp and Paper Canada 77(11): 52-54. Nov 1976.

National forest policy for Canada.

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C2 USDA FOREST SERVICE. The National Forest Management Act of 1976. USDA Forest Service Current Information Report No. 16. 28 pp. + app. Dec 1976.

Text and explanation of the Act.

C2 VANCE, JOHN A. Environmental regulations and laws. Forest Farmer 36(5): 61-63. Mar 1977.

Includes table of environmental pollution regulations for southeastern U.S. forest landowners.

D1b HARGREAVES, JR., L. A. Trends in property taxes. Forest Farmer 36(5): 47-50. Mar 1977.

Taxation of forest property, particularly in the South.

D1b KLEMPERER, W. DAVID. Impacts of tax alternatives on forest values and investment. Land Economics No. 52, pp. 135-157. May 1976.

Bid prices for forest land are likely to be lowest under a productivity tax, highest under a yield tax, and in between for the ad valorem tax (assuming tax capitalization). Average bid prices for immature timber tend to follow the reverse ranking under these tax systems.

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D1c BRIGGS, CHARLES W. Capital gain and loss treatment for timber. Forest Farmer 36(5): 51-61. Mar 1977.

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A2 NOLLEY, JEAN. Christmas trees, a bibliography. American Christmas Tree Journal 20(4): 25-28. Nov 1976.

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A5b ALLGEMEINE FORSTZEITSCHRIFT. Recreation facilities in forests. In German. Allgemeine Forstzeitschrift 31(24): 512-519. 1976.

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A5b WEBER, H. Quantifying the recreation function of the forest: a theoretical and practical analysis of the applicability of methods for measuring and evaluating the demand for weekend recreation in the forest or on its borders, in Baden-Wurttemberg. In German. Mitteilungen der Forstlichen Versuchs- und Forschungsanstalt Baden-Wurttemberg No. 73, 183 pp. 1976.

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A7 LIME, DAVID W. Wildlife is for nonhunters, too. Journal of Forestry 74(9): 600-604. Sep 1976.

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A8 GOLD, SEYMOUR. Social and economic benefits of trees in cities. Journal of Forestry 75(2): 84-87. Feb 1977.

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B3 EVANS, JULIAN. Plantations, productivity and prospects. Australian Forestry 39(3): 150-163. Sep 1976.

Probable increasing dependence on fast-growing plantations in the tropics to meet the rising world demand for wood products.

B3 KEIL, BILL. Tillamook, a modern success story. American Forests 83(3): 20-23, 58-60. Mar 1977.

The Tillamook Burn was one of the West's worst natural tragedies. Three people and millions of animals were killed, while 13 billion board feet of old-growth timber were destroyed, in three major fires in 1933, 1936, and 1939. In a 28-year effort, the people of Oregon have turned the 355,000 acres of Tillamook into a growing forest.

III APPLIED TO FOREST PRODUCTION

B3 LUGANSKII, N. A., R. P. ISAEVA, and P. I. VELIKZHANIN. Ways of obtaining forest regeneration in the Urals. In Russian. Lesnoe Khozyaistvo No. 11, pp. 21-23. 1975.

Financial comparison of natural regeneration and regeneration by plantations in the Urals.

B3 NILLE, B. Forest yield study of reforestation stands in reclaimed areas of the Bavarian Lignite Industries. In German; Eng. sum. Forst- Wissenschaftliches Centralblatt 95(4): 197-210. Aug 1976.

Reforestation of deposits and slag-heaps was begun in 1951. By 1975, 500 hectares had been reforested.

B5 BOWERSOX, T. W., and W. W. WARD. Economic analysis of a short-rotation fiber production system for hybrid poplar. Journal of Forestry 74(11): 750-753. Nov 1976.

Cost of producing and harvesting a ton of fiber for 3 hybrid clones planted on abandoned fields in Pennsylvania.

B5 GREGERSEN, HANS M., and THOMAS W. HOUGHTALING. Economics and national forest timber harvests, additional considerations. Journal of Forestry 75(1): 28-29. 1977.

The case for financial criteria leading to accelerated harvests of national-forest timber is strengthened by (1) using higher rates of interest, (2) taking account of social benefit rather than only stumpage revenue, and perhaps (3) considering foreign-trade impacts of the allowable harvest.

B5 HARTMAN, RICHARD. The harvesting decision when a standing forest has value. Economic Inquiry 14(1): 52-58. 1976.

Presence of recreation or other nontimber values may have an impact on when or whether to harvest timber.

B5 HAYNES, RICHARD W. The influence of national forest harvest flows on the competitive structure of the forest products industry. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 19 pp. 1976.

Changing Forest Service harvests had little effect on competition in the wood-using industry.

B5 HRUBES, ROBERT J. National forest system working circles, a question of size and ownership composition. USDA Forest Service Pacific Southwest Forest and Range Experiment Station Gen. Tech. Rep. PSW-16, 8 pp. 1976.

III APPLIED TO FOREST PRODUCTION

A larger total potential yield on national forest land could result from larger working circles. Alternatives for expansion of working circles must be assessed in light of present Forest Service timber-management policy and the impacts of timber supply. Feasible alternatives would require a change in basic management policy.

B5 IRLAND, LLOYD C. Impact of alternative national forest timber harvest levels on the economic structure of the forest products industry. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 76 pp. 1976.

Major changes in the level of timber cut on national forest lands could affect the economic structure and performance of U.S. forest industry.

B5 JOHNSON, K. NORMAN. Optimizing timber sales during the conversion period. In English; Fre. sum. Canadian Journal of Forest Research 6(4): 462-466. Dec 1976.

A perennial problem in timber management concerns the rate at which timber should be sold while a forest is converted from an unregulated to a regulated condition. An analysis of this problem was recently undertaken for a private timber company in the western United States.

B5 JOSEPHSON, H. R. Economics and national forest timber harvests. Journal of Forestry 74(9): 605-608. Sep 1976.

Financial criteria (leading to accelerated harvests) are less desirable than the present policy of nondeclining yield for setting allowable timber harvest for national forests because (1) the Forest Service must consider costs and benefits beyond the stumpage market, (2) what rate of interest to use with financial calculations is unclear, (3) financial criteria would increase the value of national forest timber but reduce that of other timber, (4) these criteria may not be politically acceptable.

B5 LEWIS, GORDON D. Effects of Forest Service timber policies on consumption of nonwood construction materials. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 19 pp. 1976.

Reducing the allowable cut on western national forests is not expected to raise softwood product prices far above prices of nonwood construction materials. The use of substitute materials, should, therefore, not increase.

III APPLIED TO FOREST PRODUCTION

B5 SASSAMAN, ROBERT W. Effects of harvest scheduling alternatives on nontimber benefits. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 22 pp. 1976.

Estimated impact of timber-harvest scheduling alternatives on nontimber benefits in the Pacific Northwest.

B5 SCHWEITZER, DENNIS L. Timber harvest scheduling and the role of uncertainty in defining Forest Service options. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 37 pp. 1976.

Forest Service options to alter timber harvest schedules depend upon social acceptance of change, present and future inventories of wood, the existing timbering margin relative to nontimber resource constraints, and the availability of budgets.

B5 SMITH, J. HARRY G. Variations in implementing sustained-yield forestry in Canada--Quebec. In English; Fre. sum. Prepared for the Western Forest Economists Meeting, Wemme, Oregon, May 3-5, 1976. The Forestry Chronicle 53(1): 15-19. Feb 1977.

By 1982, all timber limits will be managed by the Quebec Department of Lands and Forests. Wood will be made available on a volume-allotment basis for 10-year, once-renewable terms.

B5 WETTON, E. A. F. Variations in implementing sustained-yield forestry in Canada--British Columbia. The Forestry Chronicle 53(1): 26-31. Feb 1977.

Re-evaluation of sustained-yield forestry is needed for improved management and for more efficient use of forest resource.

C HAALCK, HENRY G. The role of physical and nonphysical determinants of resource access roads in national forest transportation planning. Dissertation, Ph.D. State University of New York College of Environmental Science and Forestry. 386 pp. 1975.

Nonphysical determinants: laws, regulations, orders, objectives, plans, studies, research, hearings, court actions, advisory committees, interest groups, the public, economic factors. Physical determinants: geographic location, land-surface forms, terrain features, national forest resources, road characteristics, and transportation systems as they relate to national forests.

III APPLIED TO FOREST PRODUCTION

C HEINRICH, R. (COMP.). Technical report of FAO Austria Training Course on Forest Roads and Wood Harvesting in Mountainous Forests, Ossiach, Austria, June 1-29, 1975. In English. Food and Agriculture Organization of the United Nations. 328 pp. 1976.

Papers include: the supporting program for forest road construction in Austria (E. Neuberger); the routing and the use of forest roads in the mountains (E. Pestal); planning of forest roads (U. Sundberg); practical planning and layout of forest roads (O. Sedlak); economic considerations for forest roads (W. Hackl); the forest road in the cultivated landscape, its function in forest production and in nonproductive areas (E. Tuechy); the World Food Program assistance to forest-road construction in developing countries (P. Terver).

D1 BAIRD, ANDREW W. The perception which local governmental and private forestry related organizations have of their roles in forest fire prevention. Dissertation, Ph.D. Louisiana State University and Agricultural and Mechanical College. 160 pp. 1976.

Effectiveness of forest-fire prevention efforts in a south Mississippi county.

D1 BARNEY, RICHARD J. Land use planning-fire management relationships and needs in the U.S. Forest Service. Dissertation, Ph.D. Michigan State University. 258 pp. 1976.

Purpose of the study was to (1) identify relationships between land-use planning and fire management, (2) find ways of integrating fire management into land-use planning, and (3) recommend modifications of land-use planning to include fire-management considerations.

D1 DAVIS, JAMES B., and ROBERT L. IRWIN. FOCUS, a computerized approach to fire management planning. Journal of Forestry 74(9): 615-618. Sep 1976.

FOCUS is a Forest Service large-scale computer simulation model that evaluates alternative fire-management plans. The model, which became operational in 1976, can also be applied to fire-related environmental, economic, and political problems and to land-use planning.

D1 JUNG, H. Forest fire safety. In German. Forstarchiv 47(5): 96-98. May 1976.

III APPLIED TO FOREST PRODUCTION

D1 MOAK, JAMES E. Fire prevention, does it pay? Journal of Forestry 74(9): 612-614. Sep 1976.

Benefit-cost analysis can be used to give the fire-control administrator a basis for decision-making.

D1 OZYIGIT, ALI, and CARL C. WILSON. Forestry and forest fire in Turkey. Fire Management Notes 37(2): 17-20. 1976.

D1 STANKEY, GEORGE H. Wilderness fire policy, an investigation of visitor knowledge and beliefs. USDA Forest Service Intermountain Forest and Range Experiment Station Res. Pap. INT-180, 17 pp. 1976.

Most wilderness visitors favor suppression, while a substantial minority favor a more natural role for fire. As visitor knowledge about the role of fire increases, the likelihood of support for a more natural role for fire also grows.

E BELL, ENOCH, and ROGER FIGHT. Risk and uncertainty in timber harvest scheduling. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 26 pp. 1976.

Decision theory and public-agency attitudes toward risk and uncertainty. Procedure for risk management is proposed.

E FRAZER III, ELEY C., and PHILIP HODGKINS. Timber management plans for modest-sized landowners. Forest Farmer 36(5): 11-13. Mar 1977.

E HOFLE, H. H. Organizing the flow of information in forest enterprises. In German. Holz-Zentralblatt 102(72/73): 1004, 1006-1008. 1976.

Computerized management information systems will aid decision-makers and planners.

E HRUBES, ROBERT J., and DANIEL I. NAVON. Application of linear programing to downward sloping demand problems in timber production. USDA Forest Service Pacific Southwest Forest and Range Experiment Station Res. Note PSW-315, 6 pp. 1976.

Allocation models based on linear programing are becoming widely used in scheduling timber harvests.

E JANSEN, HENRICUS C. Range RAM...a long-term planning method for managing grazing lands. USDA Forest Service Pacific Southwest Range and Experiment Station Res. Pap. PSW-120, 15 pp. 1976.

III APPLIED TO FOREST PRODUCTION

Range RAM (Resource Allocation Method) is a computerized planning method designed to assist range managers in developing and selecting alternatives in spatial and temporal allocation of resources. The technique is applicable at the forest or district management levels, or their equivalents.

E MARTY, ROBERT. Options for incorporating intensive management in allowable cut calculations. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service. 20 pp. 1976.

Mathematical models for timber harvest scheduling using area, volume and value regulation.

E MURPHY, P. A. Effective allocation of cost-sharing funds for forestry, an example. USDA Forest Service Southern Forest Experiment Station Res. Pap. SO-128, 14 pp. 1976.

Parametric linear programming enables administrators to rank areas on the basis of economic potential. Area's potential productivity and cost and manpower limitations are taken into account.

E PORTERFIELD, RICHARD L. A goal programming model to guide and evaluate tree-improvement programs. Forest Science 22(4): 417-430. Dec 1976.

Aids managers in developing optimum selection scheme.

E RAFSNIDER, GILES T. A model for integrating risk considerations in timber management through a harvest loss indemnity program. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 14 pp. 1976.

Model incorporates risk into management planning for immature and mature timber stands to account for shortfalls from prespecified harvest level targets.

E RIPLEY, THOMAS H., and C. W. MOODY. WRAP--Woodland Resource Allocation Procedure. Forest Farmer 36(4): 6-8. Feb 1977.

TVA's new program is designed to assist landowners in making management decisions.

E SCHUSTER, ERVIN G., HARRY SOLOMON, C. J. TORNABENE, and ALFRED D. TUROWSKI. Local economic impact, a decision variable in forest resources management. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 157 pp. 1976.

III APPLIED TO FOREST PRODUCTION

Model for analyzing local economic impacts of changes in timber harvest. Major classes of impacts considered include economic activity, individual welfare, area equilibrium, and local government.

E SECELEANU, I. [1] Objective decision making in the production of a working plan with the aid of mathematical programming. [2] Mathematical simulation of the management of the natural process of forest production. In Rumanian; Eng. sum. Studii si Cercetari, Institutul de Cercetari si Amenajari Silvice, I (Silvicultura) No. 33, pp. 187-202; 203-212. 1975.

[1] Three models for optimizing timber yield based on maximum periodic increment, minimum departure from rotation age, and maximum value. Models employ standard computer programs for linear programming and other multidimensional programming. [2] SIMPROF: simulation model of a managed forest; advantages of simulation over mathematical programming.

E SECELEANU, I., C. NEAMTU, and M. BOBIRNAC. Flow diagram of a system of programs for automatic revision of the working plan. In Rumanian; Ger. sum. Studii si Cercetari, Institutul de Cercetari si Amenajari Silvice, I (Silvicultura) No. 33, pp. 175-185. 1975.

An experimental, fully computerized system of forest management consisting of four subsystems: incorporating and editing field data; organizing the data base; data retrieval and sequential indexing; and producing the revised plan.

E VORONITSYN, I. I., and L. E. MIKHAILOV. Integrated solution of problems in forest utilization and silviculture. In Russian. Lesnaya Promyshlennost' No. 5, pp. 20-21. 1976.

Computer-based models of standard or reference felling areas are needed in the USSR for the entire country, for major economic regions, for administrative units, and for forestry regions. These models will aim to produce optimum solutions to problems in logging and silviculture.

E WILLIAMS, DOUGLAS H., and M. M. YAMADA. A clustering technique for land management models. Canadian Journal of Forest Research 6(4): 532-538. Dec 1976.

Cluster analysis can be used to aggregate land units into efficient data sets for land-management models. The descriptive variables of the land units are chosen for their importance in the structure of the model. The land units are grouped so that the error of aggregation is minimized.

IV APPLIED TO MANUFACTURING

A1b CANADIAN FOREST INDUSTRIES. Planing the slivers away. Canadian Forest Industries 97(1): 13-17, 21, 23, 25, 29, 33, 36. Jan 1977.

State of forest industry in British Columbia, Alberta, Saskatchewan, Ontario, New Brunswick, and Nova Scotia.

A1b RUDERMAN, FLORENCE K. Production, prices, employment, and trade in northwest forest industries, third quarter 1976. USDA Forest Service Pacific Northwest Forest and Range Experiment Station, 53 pp. 1976.

Current information on lumber and plywood production and prices, employment in the forest industries, international trade in logs, lumber, and plywood, volume and average prices of stumpage sold by public agencies, and related items.

A1b WELCH, RICHARD L., and THOMAS R. BELLAMY. Changes in output of industrial timber products in Georgia, 1971-1974. USDA Forest Service Southeastern Forest Experiment Station Res. Bul. SE-36, 28 pp. 1976.

Total output of industrial timber products in Georgia amounted to almost 986 million cubic feet in 1974. Production increased in each major category of roundwood products and plant byproducts: softwood and hardwood.

A1c DAVIS, GEOFFREY. Softwood statistical trends in 1976. Timber Trades Journal 300(5242): 14, 19-20. 1977.

Status of softwood industry in UK, 1976.

A1c SOPKO, ROLAND L. USSR prepares next five-year plan. Norsk Skogindustri 30(11): 320-322. Nov 1976.

Pulp production is expected to rise by 35 percent; paper and board, by 15 to 25 percent.

A1c STIPETIC, I. Financial situation of the wood industry in Croatia. In Serbo-Croatian; Ger. sum. Drvna Industrija 27(5/6): 109-113. 1976.

Inflation has contributed to the indebtedness of the industry in recent years.

A1e FENTON, R. Wood products development and promotion in Tropical South Pacific countries. Philippine Lumberman 21(4): 18, 23, 26-28. 1975.

IV APPLIED TO MANUFACTURING

1968-73 production and export of logs and lumber from Papua New Guinea, British Solomon Islands Protectorate, Fiji and Western Samoa; present and future roles of their domestic and export markets; lumber imports; domestic firewood, pole and plywood production and wood preservation.

A1e SIMIONI, A., and S. KEINER, JR. Development of wood exploitation in Brazil. In Portuguese; Eng. sum. Floresta 6(2): 39-45. 1976.

History of wood industries in Brazil since 1500.

A2 BUTLER, CHARLES R. Forest products directory, 1976. State of Washington, Department of Natural Resources. 170 pp. Jan 1976.

A2 FOREST FARMER. Markets for your timber. Forest Farmer 36(5): 71-100. Mar 1977.

Directory for southern states: wood yards; pulp and paper mills; lumber companies; plywood plants.

A4 HAYNES, RICHARD W. A dynamic spatial-equilibrium model of the softwood timber economy with demand equations specified. Dissertation, Ph.D. North Carolina State University. 109 pp. 1975.

A model for estimating changes in product prices and processing-plant location resulting from changes in the geographic pattern of United States softwood timber output.

A4 HOLECEK, DONALD F. A systems model of an integrated forest products firm with decision-making applications. Dissertation, Ph.D. University of California. 166 pp. 1975.

Computer technology as a means for improving the resource-allocation decision-making process of complex forest-products firms.

A4 KEIPI, KARI J. Transfer pricing alternatives for allocating logs in a forest products firm. Dissertation, Ph. D. Oregon State University. 228 pp. 1976.

Theory suggests that transfer price of logs should be their competitive market prices. Study showed that best transfer price for a mixed-dominance firm is the expected market price; for a timber-dominant firm, the expected harvesting cost. In a mill-dominant firm the best transfer price may be above, equal to, or less than the expected market price.

IV APPLIED TO MANUFACTURING

A4 LARSON, ROBERT E. A wood processor and timber inventory analysis in northern Colorado. Dissertation, Ph.D. Colorado State University. 109 pp. 1976.

An area's primary wood-product potentials can be estimated from (1) data on available timber supply, and (2) information on production and marketing capabilities of area processors.

A4 RONDEUX, J. The management of central timberyards for primary conversion of forest produce. In French; Dutch, Ger., and Eng. sum. Bulletin de la Societe Royale Forestiere de Belgique 83(2): 61-70. 1976.

Large central timberyards hold advantages for forest owners; owners would be paid better prices since very large numbers of logs would be collected and sorted at one time. Computerized system has been devised to manage large central timberyards.

B1 BAIRD, DAVID R. Tropical logging investment, Part II. Selecting the optimum machines, methods; Latin American tropical logging status. In English; Ger., Fre., and Spa. sum. World Wood 18(3): 9-10. Mar 1977.

B1 BLANDON, PETER R. Soviets plan greater logging productivity. In English; Ger., Fre., and Spa. sum. World Wood 18(3): 18-19. Mar 1977.

Higher per-man output through use of more advanced mechanized logging equipment is one of the goals of the tenth Soviet Five-Year Plan, which began in 1976.

B2 BUEREN, E. M. L. VAN. Mechanized logging in Sweden and the Netherlands. In Dutch; Eng. sum. Nederlands Bosbouw Tijdschrift 48(5): 124-130. 1976.

Because of greater mechanization and thus lower logging costs in Sweden, stumpage prices for comparable sizes of spruce and pine are twice as high in central Sweden as in the Netherlands, though prices at roadside are similar. Possibilities of increasing mechanization in the Netherlands, taking into account effects on the ecosystem, silviculture, and social values.

B2 KELLOGG, LOREN, and ED AULERICH. Prebunch-and-swing technique may reduce your thinning costs. Forest Industries 104(2): 30-32. Feb 1977.

Results of study in a stand of Douglas-fir in the Pacific Northwest.

IV APPLIED TO MANUFACTURING

B2 SRUN, SIN MENG. Employment of modern technical analysis to increase the efficiency of tropical logging operations. Dissertation, Ph.D. University of Georgia. 186 pp. 1976.

To estimate efficiency, (1) estimate working period; (2) estimate output per unit time; (3) estimate cost of labor and machinery per unit time; (4) compute direct cost per unit output; (5) estimate indirect cost; and (6) compute total cost per unit output.

B3a PERLAC, J. The complex utilization of the raw material wood in Czechoslovakia. In German; Eng. and Rus. sum. Holztechnologie 16(4); 225-228. 1975.

Czechoslovakian forests are 70 percent coniferous, 30 percent broadleaved. Proposals for virtually complete wood utilization, particularly through new uses for hardwoods and wood residues.

B3a PORTERFIELD, RICHARD L. Utilization, status and trends. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 44 pp. 1976.

Status, recent trends, and prospects for close timber utilization in logging.

B3b BARGER, R. L. Potential utilization of the forest residue resource in the northern Rocky Mountain area. USDA Forest Service. Paper presented at Rocky Mountain Forest Industries Conference, Missoula, Montana, April 26-28, 1976. 6 pp. 1976.

Improved harvesting and utilization could place substantial amounts of dead timber and logging residues within economic reach, adding to the available timber supply. Opportunities for utilizing residue material seem most promising for conventional wood products, pulp chips, particleboard furnish, and industrial fuel.

B4 HANAYA, MORIMASA. Short logs, an alternative to transporting whole logs and chips. Pulp and Paper International 19(1): 40-43. Jan 1977.

Short-log system enjoys lower investment costs and cheaper transport.

B4 KLOCK, Glen O. Estimating two indirect logging costs caused by accelerated erosion. USDA Forest Service Pacific Northwest Forest and Range Experiment Station Gen. Tech. Rep. PNW-44, 9 pp. 1976.

IV APPLIED TO MANUFACTURING

A comparative yarding-cost estimate for forest areas where soil-erosion potential is high.

B4 MC NUTT, JAMES A. A stochastic analysis of erosion and economic impacts associated with timber harvests and forest roads. Dissertation, Ph.D. Oregon State University. 216 pp. 1976.

Evaluating effects of timber-harvest and forest-road alternatives on soil erosion.

B4 OVEREND, MILES. Skyline logging born again. Canadian Forest Industries 97(2): 35-36. Feb 1977.

Rising costs of road construction and yarding have aroused new interest in skyline logging.

C1c KOCH, PETER. Laminated lumber may be more profitable than sawn lumber. Forest Industries 103(6): 42-44. Jun 1976.

By laminating quarter-inch rotary-cut veneer into structural lumber, manufacturers can expand lumber output by at least 30 percent.

C2a ASENJO, P. Pulp from native Chilean woods. Some general considerations. In Spanish; Ger. and Eng. sum. Charlas y Conferencias No. 3, pp. 1-11. 1975.

Status and prospects of pulp and paper industry in Chile.

C2a 1976 GUIDE TO THE PAPER AND PULP INDUSTRY. Third edition. 213 pp. C. H. Kline & Co., Fairfield, N.J. 1976.

Economic analysis of the industry; data on production, shipments, end uses, major competitors, and price trends for 26 product groups and 35 primary and secondary products; directory of 480 companies with sales of over $5 million, including their estimated sales by product or product line.

C2a KALISH, JOHN. South Africa today. In English; Ger., Fre., Spa. sum. Pulp and Paper International 19(3): 35-41. Mar 1977.

A million-ton operation, South Africa's paper industry could double its output in 10 years if the industry's growth forecasts are realized. A highly-concentrated structure, strong financial base, adequate raw materials, and good economies of scale--all support this growth potential.

IV APPLIED TO MANUFACTURING

C2a MACDONALD, R. G. Paper industry capacity and growth trends (1975-1978). Southern Pulp and Paper Manufacturer 39(12): 34-35. Dec 1976.

C2a ZIMMERMAN, A. H. Men, money, and forests. Paper presented to the Faculty of Forestry and Landscape Architecture, University of Toronto, November 24, 1976. University of Toronto, Toronto. 16 pp. Nov 1976.

Pulp and paper industry of Canada faces financial difficulties that arise from its high capital intensity and its concurrent weak market position in the world and its unit costs of manufacture, greater than in the U.S.A. Further, the industry's ills are aggravated by its need to maintain output regardless of technological obsolescence, wage demands, or sagging markets.

C2b CALDWELL, M. HARRISON. Maintenance-management system saves mill $1.2 million annually. Pulp and Paper 51(2): 146-148. Feb 1977.

C2c BELLAMY, THOMAS R. Southern pulpwood production, 1975. USDA Forest Service Southeastern Forest Experiment Station Res. Bul. SE-37, 21 pp. Sep 1976.

Production in 1975 dropped a record 14 percent from 1974. 16 percent drop in roundwood accounted for over 80 percent of total decline.

C2c BONES, JAMES T., and DAVID R. DICKSON. Pulpwood production in the Northeast, 1975. USDA Forest Service Northeastern Forest Experiment Station Res. Bul. NE-45, 21 pp. 1976.

1975 compared with 1974; trends, 1963-1975; pulp-mills operating in 1975.

C2c FALK, JONATHAN. The organization of pulpwood harvesting in Maine. Yale University School of Forestry and Environmental Studies. Working Paper No. 4. 67 pp. Feb 1977.

Pulpwood loggers and truckers are the backbone of Maine's wood industry. Numbers employed in pulpwood production; cost and productivity of various harvesting systems; role of independent contractors, Canadian labor, pulpwood brokers, and company harvesting crews in pulpwood procurement.

C2c STUART, W. B., and SCOTT SHARTLE. Predicted forestry, harvesting and pulpwood procurement conditions for the years 1980 and 2000. American Pulpwood Association Survey Report. 30 pp. Jan 1977.

Results of a 1974 survey.

IV APPLIED TO MANUFACTURING

C3a FOREST INDUSTRIES. Annual wood-based panel review. Forest Industries 104(3): 38-51, 94-115. Mar 1977.

Includes the following articles: Southern pine plywood, from 0 in '64 to 33 percent of U.S. output in '76 (R. Baldwin). The 1970's, a dynamic decade in the world of panel products (J. Bonney). Stabilized markets by summer '77 forecast for Canadian plywood (C. Shaw). Second successive record year seen for softwood plywood output (American Plywood Association). Directory of Panel Plants, U.S. and Canada.

C4 LABOSKY, JR., PETER, K. A. HOLLEMAN, J. W. DICK, and DANG THI SO. Utilization of bark residues as poultry litter. Forest Products Journal 27(1): 28-32. Jan 1977.

Tons of bark residues could be used profitably and harmlessly as chicken litter.

C4 NEILL, R. D. Options for the use and disposal of bark. Pulp & Paper Canada 77(3): 45-49. 1976.

Economic production of fuel from bark and wood waste.

C4 REVUE DU BOIS ET DE SES APPLICATIONS. Recovery of packing materials for production of chips. In French. Revue du Bois et de ses Applications No. 6, pp. 15-21. 1976.

Economic and technical aspects of using wood from crates, pallets, and other packing materials.

C4 SAMPSON, G. R., and H. E. WORTH. Economic advantages and disadvantages of producing pulp chips in the woods in the Southwest. Transactions of the ASAE 19(4): 635-638. 1976.

In-woods debarking-chipping slightly reduces costs of felling, limbing, bucking, skidding, and decking. Reductions are offset, however, by costs of reskidding and debarking-chipping.

C4 SIEDLACK, EDWARD R. Urban wood waste, a potential source of low-cost fiber for industry. In English; Fre., Ger., Spa. sum. Pulp and Paper International 19(3): 47-48. Mar 1977.

In a large city, wood can be salvaged from broken pallets, demolition lumber, construction lumber, scrap from converting industries, crates, and dunnage. Scrap can be recycled into chips for pulp and paper, particleboard, and fuel.

IV APPLIED TO MANUFACTURING

C9 SOTU, G. Some basic aspects of the particleboard industry. In Spanish; Eng. sum. Charlas y Conferencias No. 3, pp. 21-32. 1975.

C10 TEEGUARDEN, DENNIS, and NICHOLAS DENNIS. Effect of harvest scheduling alternatives on the stock of social capital, the case of housing. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service. 1976.

National forest timber harvest policy will not significantly affect housing.

V APPLIED TO MARKETING, TRADE, AND DEMAND FOR FOREST OUTPUT

A2 STEINLIN, H. Supply of and demand for wood in Europe at the present time and in the future. In German; Eng. sum. Holz als Roh- und Werkstoff 33(12): 461-466. 1975.

Predicted trends in wood production and consumption. Largest increase in consumption is expected to be in paper and paperboard. Dependence on imports will increase.

B1a FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Joint ECE/FAO Division. Forest products market trends in 1975 and prospects for 1976. In English and French. Geneva. Dec 1975.

Exports and imports of logs, sawnwood, panels, and pulpwood.

B1b TEBBUTT, ROBERT. Futures. Canadian Forest Industries 97(2): 41-43. Feb 1977.

Lumber producers who are not prepared to risk price drops can buy price protection by hedging on the lumber futures market.

B2 AREVALO, R., and J. SANVICTORES, J. DE LA ROSA. The modification or suspension of the log export ban. Philippine Lumberman 21(11): 4, 22, 34. 1975.

Wood industry's point of view.

B2 DARR, DAVID R. Floating exchange rates and log export policy. Journal of Forestry 75(2): 88-90. Feb 1977.

Relation of softwood log exports to balance of payments; events leading to shift from fixed to floating exchange rates in 1973; bearing of floating exchange rates on balance of payments; relation of floating exchange rates to debate over softwood log exports.

B2 FENTON, R., and R. B. TENNENT. Export log afforestation profitability 1973. New Zealand Journal of Forestry Science 5(3): 323-346. 1976.

Questionable financial benefit from processing forest products for export. Log export, known to be highly profitable, should be reinstated as a major aim of forest expansion.

B3 DARR, DAVID R. Effects of national forest timber flows on international trade patterns. Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 53 pp. 1976.

V APPLIED TO MARKETING, TRADE, AND DEMAND FOR FOREST OUTPUT

Among trade items, only softwood lumber imports from Canada are considered to be responsive to changes in national forest timber flows. Method used to translate changes in softwood lumber imports from Canada into changes in prices and employment in the U.S. softwood lumber and plywood industries.

B5 EMBREE, D. G. Studies assess customer reaction to graded balsam fir Christmas trees. American Christmas Tree Journal 20(3): 3-6. Aug 1976.

B5 JONES, PHIL. Fundamentals of choose and cut. American Christmas Tree Journal 21(1): 25-29. Feb 1977.

Increasing numbers of Christmas-tree growers have adopted choose-and-cut: The customer selects the tree and cuts it himself.

C2 EDEN, J. The development of prices for wood and logging costs in Sweden 1955-1975. In Swedish. Sveriges Skogsvardsforbunds Tidskrift 74(1): 45-50. 1976.

Stumpage values.

C2 YOUNGDAY, DOUGLAS J. Who benefits from cheap wood? Background report to Timber Harvest Scheduling Issues Study. USDA Forest Service, 52 pp. 1976.

Renters of housing and people with low incomes are most affected by log prices.

C3 BELLAMY, THOMAS R. Pulpwood prices in the Southeast, 1975. USDA Forest Service Southeastern Forest Experiment Station Res. Note SE-241, 3 pp. Oct 1976.

Prices increased slightly in 1975. Total pulpwood receipts amounted to 20.4 million cords, a drop of 15 percent from 1974.